

Ecology's Nonpoint Nutrient Strategy

Nutrient pollution in our waterways is perhaps the greatest water quality challenge facing America today. It is a challenge that will require actions from all contributors to the problem to solve it. Ecology's nonpoint nutrient strategy focuses on many different implementation paths to achieve clean water. However, no matter the approach we continually strive for greater regulatory clarity to achieve reductions in nutrients reaching state waters. This document's purpose is to capture our nutrient management strategy and its combination of regulatory, prevention programs, and funding mechanisms as the best methods for Washington's Department of Ecology (Ecology) to control nutrient loads from point and non-point sources.

The primary nutrients of concern are phosphorus and nitrogen which are essential for growth and productivity in aquatic ecosystems. However, when human-caused pollution delivers higher than natural levels of these nutrients they act as pollutants and are detrimental to the integrity of Washington's waters.

Federal and State Authority

The predominant source of nitrogen and phosphorus can differ from one body of water to the next, but generally follows the predominant land use. Commercial fertilizers are generally the main source of nitrogen in most agricultural watersheds. Animal manure is generally the major source in watersheds with large populations of confined livestock and in watersheds with extensive rangeland. Atmospheric deposition can be the primary source of nitrogen in undeveloped watersheds. In some urban watersheds, municipal wastewater can be the largest source of nitrogen loadings.¹

Nitrogen and phosphorus enter surface waters from both point sources (including municipal wastewater treatment facilities, large stormwater discharges, industrial discharges, and concentrated animal feedlots or CAFOs) and nonpoint sources (including runoff and drainage from farmland, animal grazing lands, on-site septic systems, and suburban lawns). Nutrients enter groundwater largely from nonpoint sources.

The Federal Clean Water Act (CWA) primarily controls point source discharges through permits. Nonpoint sources are not systematically regulated by the CWA. Instead, nonpoint pollution is primarily addressed through section 319 which relies on incentives, and state plans and authority to control nonpoint sources.

¹ See, Controlling Nutrient Loadings to U.S. Waterways: An Urban Perspective at <http://www.nacwa.org/images/stories/public/2012-03-06wp.pdf>. Additionally, see the South Puget Sound Dissolved Oxygen study for information on loadings from WWTPs (http://www.ecy.wa.gov/puget_sound/dissolved_oxygen_study.html).

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Additionally, the U.S. Department of Agriculture (USDA) operates voluntary programs that can be used to control nonpoint sources. Farm bill programs target a variety of conservation-related goals, including soil conservation, habitat restoration, wetlands preservation and water quality. These programs are voluntary and provide cost-share payments to agricultural operators as incentives to participate.

EPA delegated the administration of the CWA's point source permit program to Washington State's Department of Ecology (Ecology). The permit program considers technology based and water quality based standards when issuing a permit. Permit writers must consider the impact of every proposed discharge to surface waters on the quality of the receiving water and specifically consider how the discharge may affect the use of the receiving water. In some cases, this consideration may reveal that permit limits based on a treatment technology are not sufficiently stringent to protect water quality even with a mixing allowance. In these cases, additional permit limits must be developed, or alternative disposal methods or locations must be found. TMDLs that address dissolved oxygen may include wasteload allocations (WLA) for specific point sources. Permit limits consistent with WLA are then enforceable under CWA through National Pollutant Discharge Elimination System (NPDES).

Additionally, Ecology is designated as the 319 lead agency for Washington State's nonpoint source pollution programs. As the lead agency, Ecology is responsible for the administration of 319 pass-through and internal grant funds, the identification and establishment of priorities for nonpoint source related water quality problems, and the development of the state's nonpoint source pollution control plan. Further, under state law, Ecology is given explicit authority over nonpoint pollution control and prevention.

Washington State's nonpoint authority is found in the state's Water Pollution Control Act (WPCA). The WPCA gives Ecology the authority to take enforcement actions against nonpoint polluters. Specifically, Chapter 90.48 RCW makes it illegal discharge materials that cause or tend to cause pollution to waters of the state.² When a landowner conducts operations or activities that can be proven to contribute pollutants or contribute to degradation of state waters, they may be found in violation of this state law. Violating the WPCA may result in injunctions, civil penalties, notices of violations or administrative orders.³

Further, Washington State's Water Quality Standards require activities which contribute to nonpoint source pollution to use best management practices (BMP) to prevent exceedences of water quality criteria.⁴ The Standards define BMPs, as "physical, structural, and/or managerial practices approved by the department that, when used singularly or in combination, prevent or reduce pollutant discharges."⁵ The legal definition of BMP as applied to water quality protection

² RCW 90.48.080

³ See RCW 90.48.037, RCW 90.48.144, RCW 90.48.120, and RCW 90.48.240.

⁴ WAC 173-201A- 510(3)(c)

⁵ WAC 173-201A-020

requires all BMPs to be approved by Ecology.⁶ Given that much of nonpoint pollution cannot easily be measured, the Standards express compliance with the law by implementing Ecology approved BMPs.

To achieve regulatory clarity and provide regulatory certainty to nonpoint pollution dischargers, Ecology is working toward identifying suites of approved clean water BMPs for land use practices that create nonpoint pollution. If a person implements the applicable suite of clean water BMPs, Ecology will presume compliance with the WPCA and water quality standards. Ecology staff will utilize existing NRCS FOTGs and other management practice compilations as reference material to create the suites of clean water BMPs. Using the Ecology approved clean water BMPs can speed you through the regulatory process, and make it easy to demonstrate compliance.

In the alternative, dischargers of nonpoint pollution may select other BMPs provided that they also prevent water pollution and protect water quality. If a discharger chooses this path to compliance, they have the responsibility of demonstrating compliance. Usually, this demonstrative approach only applies under enforcement circumstances, when the discharger is obligated to show compliance. The demonstrative approach allows landowners to demonstrate to Ecology that their preferred management practices will prevent water pollution, and their operation will not violate water quality regulations. If sufficient evidence is presented, Ecology will approve the BMPs for that discharger's operation.

Under the presumed effective option, landowners could simply implement Ecology's approved clean water BMPs without technical assistance from Ecology. However, where instances of noncompliance are found, Ecology would work with the landowner to understand their obligations under 90.48 RCW and the steps they need to take to get into compliance. Ecology will attempt to achieve voluntary compliance through education and technical assistance. Often, we will team with conservation districts or local governments to provide technical assistance and funding for the implementation of best management practices. Only after collaborative efforts fail will Ecology use a traditional regulatory process to achieve compliance.

Standards Development

The state of Washington recognized the importance of nutrient criteria in the mid-nineties and subsequently adopted a process for developing lake nutrient criteria into its water quality standards in 1997. Developing statewide nutrient criteria for fresh water rivers and streams was not considered viable because of the large and diverse dynamics of our river systems in

⁶ Additionally, under public policy Washington State has required the application of *all known available and reasonable methods of treatment* (AKART) to prevent and control pollution entering waters of the state. See RCW 90.48.010; RCW 90.52.040, WAC 173-201A-300(1)(d). The AKART policy applies to both point and nonpoint sources of pollution. See WAC 173-201A-020 & WAC 173-201A-300(1).

Washington. Instead, Washington relies on dissolved oxygen and pH criteria as indicators of potential nutrient problems for rivers and streams.

When criteria development for lakes nutrients was underway (prior to the 1997 standards revision), a parallel effort evaluated “the feasibility and benefits of establishing nutrient criteria for flowing water systems. Ecology examined periphyton growth, chlorophyll *a*, nitrogen, and total phosphorous levels in ecoregions on the west and east sides of the state. Ecology’s researchers were unable to find a predictive relationship between excess production and eutrophication, and measured nutrient concentrations. Flow rates, shading, and available light are also confounding factors in eutrophication processes in streams and rivers.”⁷ So efforts to develop statewide nutrient criteria for river and stream systems were not successful in the late nineties.

To protect aquatic life in Washington’s streams, protective criteria for pH and dissolved oxygen were established. These criteria serve as sensitive indicators of riverine eutrophication. “Before nuisance levels of algal growth occur and aesthetics are noticeably impaired, streams and rivers will have violations of one or more of the state’s dissolved oxygen, pH, ammonia and turbidity criteria. These criteria, which are designed to provide full support to sensitive aquatic life communities, have been found to be more reliable indicators of trophic health.”⁸ In dissolved oxygen and pH Total Maximum Daily Load studies or TMDLs, excessive nutrients are often assumed to be one of the causes of the impairment. This enables Ecology to assess the role of nutrients in the watershed and set load and wasteload allocations for them. “Thus compliance plans for the dissolved oxygen criteria examine the influence of BOD, nutrients, and temperature to ensure the trophic health of the water body is maintained or restored.”⁹

In marine settings a lack of data in estuaries and the acknowledged highly complex relationship between nutrients and trophic health has prevented the state from developing nutrient criteria in these waters. “Tidally reversing and complex currents, stratified and unstratified sections of the receiving water, changing in the limiting nutrient form (phosphorous versus nitrogen) with depth and location, and the non-linear contributions from freshwater streams and rivers make setting statewide nutrient criteria in marine waters too problematic.”¹⁰

⁷ Allen Moore, A., Hicks, M., 2004 Nutrient Criteria Development in Washington State - Phosphorus Washington State Department of Ecology, Olympia, WA. Publication Number 04-10-033; P iv
<http://www.ecy.wa.gov/pubs/0410033.pdf>

⁸ Id.

⁹ Id.

¹⁰ Id.

Nutrient Science Efforts

Ecology is consistently looking to improve our understanding of nutrient inputs, transformations, and influences on ecological endpoints. Current efforts include developing effectiveness monitoring guidance, and studying the fate of nitrogen in animal manures used as fertilizers. Additionally, under a current NEP grant we are looking at making investments in several research projects that could improve our understanding of nutrient sources to the Salish Sea, improve our understanding of nutrient-related transport, transformation and fate, supplemental our monitoring related to nutrients, and support the development of modeling tools.

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Actions to Address Nutrient Pollution

Ecology's nutrient strategy focuses on the implementation of BMPs that protect water quality. The primary tools that we will use to guide and promote implementation are:

- TMDL implementation plans;
- Straight to Implementation (STI); and
- Grant and Loan program and its funding guidelines

Additionally, when an opportunity exists we will take advantage of other tools and advantageous watershed conditions. For example, Ecology developed a trading framework that can be used to take advantage of market based principles in the right type of watershed. Our complaint response system also provides tool to address reported sites through technical assistance, education, referrals, or in limited circumstances, escalating enforcement.

Taking advantage of favorable watershed conditions is also an important driver for on the ground implementation. Current examples include the Clean Samish Initiative and the Whatcom County Pollution Control Action Team. In both cases, we are building on the momentum that concern over shellfish bed closures spurred to promote on the ground implementation of clean water BMPs. Likewise, our support of local Pollution Identification and Control (PIC) programs will target watersheds in the Puget Sound area where a local entity has taken a key role in identifying pollution concerns and addressing pathogen and nutrient pollution from a variety of nonpoint sources, including on-site sewage systems, farm animals, pets, sewage from boats, and stormwater runoff.

Throughout our strategy there is a focus on implementation and clear standards. Moreover, there is an increased emphasis on greater regulatory clarity around what actions are necessary to achieve reductions in nutrients reaching state waters.

TMDLs and STI Projects

Ecology has taken several important steps to focus our limited resources on the implementation of BMPs that protect water quality. First, Ecology has more closely aligned the TMDL and

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nonpoint programs to better leverage an array of staff expertise and to orient programmatic efforts toward achieving measurable results.

Second, in 2012 we formalized guidance on Strait to Implementation (STI) projects, which can be used as an alternative to the TMDL process. STIs can be used in watersheds where we know the pollution problem is caused by nonpoint sources, and the actions necessary to eliminate that pollution are easily identified. STI projects are intended to implement nonpoint source controls as quickly as possible and achieve water quality standards faster. STI projects are fundamentally different from the TMDL process in that they shift the focus from plan development to the implementation of known and effective BMPs that address known pollution problems.

Third, Ecology is in the process of re-focused its efforts to ensure that the implementation plans we produce lead to actions that result in clean water through the inclusion of specific management measures. To support this focus on implementation, Ecology is developing a regulatory certainty framework that will address tribal treaty rights at risk. Further, both TMDLs and STI projects must include strategies describing how we will use all the tools at our disposal, including enforcement, to get the water clean.

Our TMDL approach will continue to seek voluntary compliance with the state WPCA and the water quality standards through the implementation of the Ecology specified suites of BMPs. However, if voluntary tools are not effective in bringing dischargers into compliance, escalating levels of enforcement could be required. Again, a complete implementation strategy (voluntary and enforcement tools) will become a required element of TMDL implementation plans and STI projects.

As Ecology moves forward, TMDL implementation plans will be required to have three key elements:

- A description of the nonpoint source BMPs that will be implemented to achieve load reductions and a description of the areas in which those measures will be needed;
- A description of all identified sources of pollution and the necessary measures needed to address those sources; and
- An implementation strategy that describes how we will use all the tools at our disposal, starting with voluntary and incentive tools, but also including escalating levels of technical assistance and enforcement, to get the water clean.

Finally, our TMDL implementation plans will be required to contain EPA's 9 key elements of a watershed plan, which allows the use of 319 funds for implementation.

Taken together, TMDLs and STI will be the key tools that Ecology uses to promote the focused implementation of BMPs needed to get to clean water.

Draft Water Quality Trading Framework¹¹

Ecology's Water Quality Program has developed a water quality trading framework to guide the development of trading programs in watersheds in which the point sources determine that they will need trading to meet TMDL wasteload allocations and the subsequent NPDES permit limits. Currently, there is a great deal of interest in various kinds of trading, primarily ecosystem trading, which many see as a way of getting more money to farmers or commercial forest companies to reimburse them for the use of BMPs. Water quality trading, however, has the specific goal of helping point source dischargers meet permit limits through the purchase of pollution reduction credits from a source of the same pollutant that is able to reduce pollution at a lower cost than the point source. This narrow definition of trading is the only one supported by EPA's trading guidance, which Washington must follow.

EPA's trading policy recommends that state programs provide:

- Timely public access to information on trades.
 - Public participation during program development and implementation.
 - Mechanisms to monitor progress, evaluate program effectiveness, and revise the program as necessary.
 - Legal mechanisms to facilitate trading.
 - Clearly defined units of trade.
 - Methods to quantify credits and address uncertainty.
 - Compliance and enforcement provisions.
- Accountability for all trades. Assurance that NPDES permit holders meet their permit limits.

Ecology supports the concept of pollution trading markets that:

- Meet the requirements and objectives of Washington's water quality standards and the federal Clean Water Act.
- Promote cost-effective water quality protection and restoration.
- Result in water quality trades that are verifiable and fully enforceable.
- Ensure credits generated by a nonpoint source from the installation of best management practices must be beyond those required to meet the most stringent load allocation applicable to that nonpoint source.
- Measure or calculate nonpoint source credits and trading ratios from the same baseline used in the TMDL and consistent with the assumptions used to develop the load allocation.

Ecology considers the most logical pollutants for trading are phosphorus, nitrogen, other oxygen-related pollutants, and sediment. We will consider trades involving temperature, although the

¹¹ See <http://www.ecy.wa.gov/programs/wq/swqs/progs.html> and <http://www.ecy.wa.gov/biblio/1110027.html>.

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lengthy time lag to produce shade may prohibit temperature trades in many watersheds. Toxics and fecal coliform may not be traded. Fecal coliform has the potential to cause localized public health impacts that trading could intensify. Toxic pollutants can accumulate in stream sediments, creating toxic “hot spots”, a problem that could be exacerbated by trading.

Ecology will continue to coordinate with regional partners in Idaho, Oregon, and EPA Region 10 as water quality trading markets emerge in the Pacific Northwest.

Ecology Grant and Loan Programs

Ecology’s Water Quality Program administers three major funding programs that provide grants and low-interest loans (The Centennial Clean Water Fund, The State Revolving Fund and Section 319 grants) for projects to protect and improve water quality in Washington. As much as possible, Ecology manages the three programs as one.

Additionally, Ecology sets aside a portion of the Section 319 pass through money for the direct implementation fund program (DIF). DIF is designed to assist Ecology’s regional offices to directly implement TMDLs, STIs and other regional nonpoint water quality initiatives. Funds must be used to implement on-the-ground practices that will provide a direct and demonstrable water quality benefit. The regional offices use DIF to address priority nonpoint projects.

Ecology views the grant and loan programs as important tools to implement measures that reduce nutrient discharges. The grants provide an incentive to support the achievement of a specific and targeted clean water objective. By coordinating our grants with our other nonpoint efforts (TMDL, STI, Shellfish Initiative and PIC program implementation) we can leverage more dollars, achieve better awareness, and ultimately attain critical mass in a single watershed.

Activities covered by these nonpoint source funds include: implementation of BMPs such as livestock fencing, buffers, agricultural waste management, restoring riparian vegetation, irrigation system improvements, habitat restoration; control of invasive species; bank stabilization projects; and promoting practices that decrease soil erosion such as direct seed.

To ensure that effective BMPs are implemented, Ecology has developed funding guidelines that provide minimum standards for certain BMPs. As we continue to refine the presumed compliance strategy and its associated suites of BMPs, the funding guidelines will be updated to ensure that funded projects result in presumed compliance.

Additionally, Ecology is taking other steps to increase the effectiveness of our funding programs. First, we are working with other agencies, through the Five Directors Talks, to find

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ways to better coordinate our funding, and share our respective programs' data and mapping projects.¹²

Finally, Ecology is re-examining how we measure outputs and outcomes, as well as, BMP costs to improve accountability and better targeting of future clean water investments.

Other Tools to Promote Implementation

In addition to the ongoing nonpoint efforts outlined above, Ecology continues to pursue and support other tools and opportunities to address nutrient pollution.

Washington Shellfish Initiative and Pollution Control Action Teams (PCAT)—targeted response

Taking advantage of favorable watershed conditions is an important driver for on the ground implementation. For example, the Washington State Shellfish Initiative has focused attention on nonpoint pollution and its impact on a critical clean water industry. As envisioned, the initiative will protect and enhance a resource that is important for jobs, industry, citizens and tribes. The initiative has three primary objectives: (1) Create a Public/Private Partnership for Shellfish Aquaculture; (2) Promote Native Shellfish Restoration and Recreational Shellfish Harvest; and (3) Ensure Clean Water to Protect and Enhance Shellfish Beds.

Ecology's nonpoint strategy aligns significantly with all of the objectives. In particular, ensuring clean water to protect and enhance shellfish beds is an area where our authority to regulate nonpoint sources of pollution and focus on implementing BMPs can be utilized. While point sources also contribute to shellfish bed closures, nonpoint pollution has repeatedly been identified as the primary source of pollution. The initiative has provided favorable watershed conditions by focusing attention and a will to use all available tools within specific watersheds to address shellfish bed closures.

In addition to a promise to direct additional funds to targeted areas, the Shellfish Initiative calls for the formation of an EPA and state (i.e., Ecology, DOH, Washington State Department of Agriculture) "pollution control action team" (PCAT) to respond quickly when water quality problems are identified that threaten shellfish areas. The team will focus in priority areas and support Pollution Identification and Control (PIC) programs where established. Further, the team will work with technical staff from affected tribes with treaty reserved rights. Services provided by the team include pollution identification, inspections, enforcement, flyovers and technical assistance, consistent with guidance provided for use of federal funds.

Due to persistent and growing concerns over vulnerable shellfish resources in Portage Bay and Drayton Harbor, Whatcom County was identified as an initial focus area for a PCAT. The

¹² Agencies participating in the Five Director Talks include Ecology, the Department of Agriculture, the State Conservation Commission, EPA and the Natural Resource Conservation Service.

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Whatcom PCAT will design and implement a comprehensive and coordinated response to water pollution issues that are affecting shellfish beds, and be responsible for on the ground actions to include pollution identification, inspections, education and technical assistance, monitoring and enforcement actions.

It is envisioned that the Whatcom PCAT will be anchored by two Ecology nonpoint source inspectors. Additionally, the team will include representatives from multiple agencies (PSP, EPA, DOH, WSDA, WSCC, NRCS, Whatcom County Conservation District, and Whatcom County Health Department and Public Works) and tribes (Lummi Nation and Nooksack Tribe) as key implementation partners.

The Washington State Shellfish Initiative and PCAT draw from the State's experience in the Samish watershed. In 2008 and 2009, the Samish Bay was closed to commercial shellfish harvest for a total of 10 weeks. All the closures were related to rain events that carried high numbers of fecal coliform bacteria to the bay from throughout the watershed. A TMDL for the watershed, completed by Ecology in 2009, identified the major sources of pollution and identified priority areas and actions for cleanup.

In response to the closures, numerous state and local agencies, tribes and other groups came together to speed up the cleanup activities in the watershed. This effort was named the Clean Samish Initiative (CSI). Ecology agreed to coordinate these efforts. The CSI's goal is to achieve both short and long-term pollution reductions in the Samish Basin.

The CSI developed a workplan to describe member-organization projects and a schedule aimed at making significant improvements in water quality. One of the key tasks was the designation of an Ecology nonpoint source pollution inspector who was tasked with inspecting properties along highly-polluted reaches of the Samish where livestock access presented potential pollution issues. The typical inspection process included: (1) making initial contact; (2) conducting an entrance interview; (3) completing a site inspection; and (4) if necessary, identifying actions needed to correct problems. Further, possible financial incentives are identified. While voluntary compliance is always preferred, inspectors also pursue an escalating enforcement process if voluntary compliance is not achieved. A similar process will be used in Whatcom County and in future PCAT activities.

While these initiatives have focused on the Puget Sound region, we will continue to look for other opportunities to focus resources in a watershed that has support and momentum around implementing actions that address nonpoint pollution.

PIC Programs

Pollution identification and correction (PIC) programs identify and address pathogen and nutrient pollution from a variety of nonpoint sources, including on-site sewage systems, farm animals, pets, sewage from boats, and stormwater runoff. The corrective actions taken by local agencies or tribes may include outreach and education, technical assistance, incentives for best management practices, and enforcement.

To promote PIC programs, DOH and Ecology offer short term federally funded grants to county governments, local health jurisdictions, and tribal governments adjacent to Puget Sound to establish or enhance PIC programs.¹³ The grant's goal is to launch and improve PIC programs that can eventually be sustainable in the long term by integrating planning across local water quality programs, interests, and concerns.

An effective program will have the following components:

- The ability to reduce or eliminate pathogen and nutrient pollution caused by on-site sewage systems, farm animal waste, pet waste, boat sewage, and rural stormwater. The capacity to address diverse sources may be accomplished through partnerships.
- An on-going assessment and monitoring program to identify and prioritize problem areas for correction. A monitoring program should include both targeted monitoring to identify pollution sources and monitoring to assess effectiveness of control efforts to ensure that waters stay clean. Assessments from other programs can be used to identify and prioritize water quality problems, for instance, the Washington State Water Quality Assessment.
- Corrective action work which includes outreach and education, technical assistance, and incentives such as cost share for the installation of best management practices. The program includes enforcement as a backstop when other methods don't fix the problem.
- A sustainable funding source.

While PIC programs are administered at the local level, Ecology has taken an active role in supporting these programs because our nonpoint strategy shares the objectives of identifying and addressing water pollution issues. Specifically, Ecology provides guidance and financial assistance to local governments to establish and carry out PIC programs. Additionally, Ecology will assist local agencies with agricultural nonpoint source enforcement actions when the local government lacks such enforcement authority.

PIC programs that are receiving funding include:

¹³ EPA is providing the funding for these grants through the National Estuary Program grant program. They are currently available from November 2011 through September 2014.

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- Hood Canal Coordinating Council
- Kitsap County
- Pierce County
- San Juan County
- Skagit County
- Thurston County

Complaint Response

All of Ecology's regional offices have staff dedicated to responding to nonpoint source pollution complaints. Ecology complaint response staff and field inspectors are the first line of Ecology employees that a nonpoint discharger will interact with after a discharge is reported or found. These staff conduct field visits, provide technical assistance, highlight financial assistance opportunities, and refer landowners (if need be) to local conservation districts for additional support. These efforts have resulted in increased awareness, community presence, implementation of BMPs, and cleaner water.

Moving forward Ecology will continue to refine our complaint response efforts to provide increased clarity around actions that contribute or have the potential to contribute nonpoint pollution to state waters, and paths to compliance. For example, Ecology has developed an inspection form and focus sheet that can be used for livestock site visits. The focus sheet explains what Ecology will look for during a site visit, what Ecology staff will discuss during a site visit, and what happens after a site visit is completed. The inspection form will help ensure consistency during site visits. These forms were created in response to the three directors talks, and a request by the agriculture community that we create something to leave behind when we do site visits and inspections.

As we continue to refine the presumed compliance strategy and its associated suites of BMPs, field staff will incorporate information about performance standards into their technical assistance and enforcement actions.

BMP Suites for Presumed Effective

Ecology is currently working through the Five Director's Talks¹⁴ to create consensus on a process for developing suites of clean water BMPs for conventional pollutants. The clean water BMPs would be researched and evaluated with the goal that their implementation will provide presumed compliance with state water quality standards. The research and field experience used to identify the impacts of several land use practices will be used to tailor suites of clean water

¹⁴ In late 2010, the Directors of Agriculture, the State Conservation Commission, and Ecology initiated the "Three Directors' Talks" (now the Five Directors with the inclusion of representatives from EPA and NRCS) to discuss how their respective agencies could "more efficiently and effectively address water quality on agricultural lands" including a focus on livestock operation BMPs.

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BMPs that provide source control and treatment of nonpoint pollution sources; including nutrients.

The collection of clean water BMP suites will become an important reference source for the development of TMDLs and STI projects, and the development of funding guidance for our grant programs, as well as a tool for resolving complaint responses and compliance field visits issues. Moreover, the clean water BMPs may also better inform local ordinances and farm planning efforts by providing a specific list of clean water BMPs that can be used to achieve, at a minimum, compliance with the state water quality standards.

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SEPA/TMDL/GMA

State agencies often lack the tools to address pollution problems that occur because of local land use decision making. While local advisory groups and other voluntary efforts do much to educate citizens about urban land use based pollution problems, they do not effectively merge science-based water quality concerns with the regulatory back-stops of the local planning process. In 2007, Ecology began to address these issues with two new efforts.

First, the Growth Management Act is a state statute that requires state and local governments to manage Washington's growth by identifying and protecting critical areas and natural resource lands, designating urban growth areas, preparing comprehensive plans and implementing them through capital investments and development regulations. This approach to growth management is unique among states. The Department of Ecology has become more active in the ordinance and plan review process to ensure that potential nonpoint sources of pollution are anticipated and managed. Working with local governments on the fundamental building blocks of planning will continue to be a powerful method of pollution prevention.

Another approach to affect local land use decisions is integrating TMDL's load allocations with the SEPA review process. In this manner, the scientific and legal information of the TMDL can inform the decision, even though the decision itself is ultimately made by the locality. In 2007, Ecology developed guidance on how TMDLs could integrate into the SEPA review process.

Partnering and Coordination

In late 2010, the Directors of Agriculture, the State Conservation Commission, and Ecology initiated the "Three Directors' Talks" (now the Five Directors with the inclusion of representatives from EPA and NRCS) to discuss how their respective agencies could "more efficiently and effectively address water quality on agricultural lands" including a focus on livestock operation BMPs. The Directors identified several discussion areas, and Ecology has supported these talks as a platform for increasing coordination between the agencies and fostering partnering opportunities. As stated above, Ecology is currently working through the Five Director's Talks to create consensus on a process for developing suites of clean water BMPs.

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Conclusion

In response to the difficulties in addressing nutrient pollution, Ecology's nonpoint nutrient strategy focuses on many different implementation paths to achieve clean water. However, no matter the approach we continually strive for greater regulatory clarity based on the best available science to achieve reductions in nutrients reaching state waters.

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